ECONOMICS INFORMATION

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Ontario

VEGETABLE CROPS ESTIMATED PRODUCTION COSTS ONTARIO, 1985

ECONOMICS AND POLICY COORDINATION BRANCH

ONTARIO MINISTRY OF AGRICULTURE AND FOOD
LEGISLATIVE BUILDINGS, TORONTO, ONTARIO, M7A 1B8

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Economics and Policy Coordination Branch
Ontario Ministry of Agriculture and Food
Legislative Buildings, Queen's Park
Toronto, Ontario, M7A 1B6
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INTRODUCTION

Since 1948, the Economics and Policy Coordination Branch has carried out comprehensive studies of major field and horticultural crops grown in Ontario. These studies were designed to determine costs and returns of various farm enterprises, as well as the physical amounts of production inputs required.

Traditionally, data was collected by means of farmer interviews. Published reports of these studies in the form of county, regional and provincial averages found a wide distribution among extension and research personnel, educational institutions, farm organizations, lending institutions and policy-makers. Cooperating farmers received reports showing their individual information in comparison with group averages.

With this extensive background in the development of cost studies, the Economics and Policy Coordination Branch has begun to use computers in the preparation of production cost data. Methods of computer simulation have now replaced the time consuming process of data collection, tabulation and analysis.

With this new approach, special attention is paid to the physical quantities and prices of inputs for each crop studied. The technology used in the production of various crops is carefully examined so that the computer models accurately reflect the appropriate production technology for each commodity.

Information on physical inputs is obtained from a number of sources, including:

1. Previous studies done by this Branch;
2. Surveys of the farm supply trade;
3. Technical input/output coefficients; and
4. The consensus of producers, researchers, and extension and agribusiness personnel.

THE DEVELOPMENT OF THE ACRES PROGRAM

A large number of computer programs that generate budgets and crop production cost estimates are now in existence. These computer programs vary in their degree of sophistication and in the amount of detail prepared. A large number of estimates covering a wide range of conditions can be generated quickly and efficiently. The effect of varying levels of technology, management practices and price levels can also be analyzed.

Cost of production estimates used in this report are based on the ACRES program. ACRES (Agricultural Crop Enterprises System) is a FORTRAN program originally written in Montana, adapted by Alberta Agriculture and recently modified and rewritten by the Economics and Policy Coordination Branch to meet Ontario conditions. All 1985 cost of production estimates in this report are based on this computer model.

METHODS AND PROCEDURES

The information used in the preparation of each production cost estimate in this report was prepared through the use of recent Economics and Policy Coordination Branch studies, plus consultations with producers and extension, research and agribusiness personnel.

For each crop cost estimate in this report, the data was organized into variable and fixed costs and totalled to arrive at the cost of production both on a per acre and per hectare basis. Variable costs are those which vary directly with the production of each crop grown. They include seed, plants, hired labor, fertilizer, herbicides, insecticides, fungicides, other materials, machinery operating costs, marketing charges and interest on operating capital. Fixed cost inputs are operator labor, management allowance, interest on land, machinery and buildings, depreciation on machinery and buildings, taxes on real estate (net of farm tax rebate), and other overhead cost items.

In this report, cash costs of production are also determined. Cash costs include total variable costs, interest on the debt portion of investment in tractors and machines, taxes and other overhead costs.

LABOR HOURS AND COSTS

The required number of labor hours was based on previous studies, as well as through discussions with those familiar with the production of each study crop. There are some crops which are harvested on a fixed rate per unit. For these crops, the labor hours and costs vary with the yields used in the cost estimate.

The operator labor hours were valued at $6.50 per hour. In addition, an allowance to management was made at the rate of 5 percent of the gross income.

The hired labor cost was calculated on a per hour basis and included benefits such as worker compensation, unemployment insurance, and the Canada Pension Plan. The rates varied according to area, crop and skill involved.

For some crops, piece work rates were used which were suggested by local farm labor pools. An allowance of 15 percent of basic earnings was added to cover benefits.

MATERIALS

The amount of each material input was based on commonly used practices. Input prices are based on averages charged by the trade in the area where the particular crop is grown. For most crops, the quantities of seed, plants, fertilizer nutrients and other inputs are given on a per hectare basis. Because of the multitude of products available, pesticides are grouped as herbicides, insecticides, fungicides, nematicides, etc. The cost and quantity of non-returnable containers is reported where applicable.

TRACTORS, MACHINES AND TRUCKS

Machinery complements used in the various crop production cost estimates were assumed to be five years old. Tractor and machine costs included depreciation, interest on investment, insurance, storage, repairs, maintenance, fuel and lubrication. If machines were used for other farming operations, costs were adjusted based on the proportion of use on the study crop. The declining balance method of depreciation was used, and a 15 percent rate to powered and a 10 percent rate to non-powered machines was applied.

Interest on machinery investment was calculated on the assumption that the equity portion was 70 percent and the debt portion was 30 percent of the total depreciated value. For this report, interest on equity was calculated at 6.5 percent, which was the average interest rate paid by chartered banks on savings accounts. The interest on the debt portion was based on the average prime rate of 10.8 percent, plus one for a total of 11.8 percent. Insurance and storage costs for machinery were based on 1.5 percent of their purchase price.

Repair and maintenance costs for individual machines were based on the fact sheet "Cost of Owning and Operating Farm Machines", Agdex 825, Ontario Ministry of Agriculture and Food.

Fuel costs were based on the size of each tractor, truck or self-propelled machine used in the production operation. The following farm-gate fuel prices were used: gasoline - 38.0¢/litre; diesel - 38.0¢/litre. The cost of oil, grease and filters was calculated at 15 percent of the fuel cost.

CUSTOM FARMWORK SERVICES

There are crops produced in Ontario where it is an accepted practice to use custom farmwork services to perform certain operations. Usually, these services are employed when the farmer needs specialized machines, such as harvesters, sprayers, fertilizer applicators and trucks. Most of these machines cannot be economically owned and operated by one producer. Custom costs were itemized on a per hectare or per acre basis.

LAND CHARGES

Determining the annual cost for land use is a controversial part in any study on production costs. During the past two decades, purchasers of farmland have been willing to pay more for it than can be justified from agricultural production. Purchasers believe the speculative aspect of land ownership offers benefits above those received from crop production. For this reason, the appropriate interest rate used in calculating the interest cost on bare land for these crop production estimates is the real interest rate. The "real interest rate" is defined as the current lending rate of interest adjusted for inflation.

In this report, interest on land investment was calculated as follows:

1. The value of bare land was based on the average value for land in areas of Ontario where the production of each study crop predominates.
2. The interest rate applied was the 5-year average of the current lending rate discounted for the rate of inflation, which resulted in a 6.4 percent rate.

The farm real estate taxes used for each study crop reflect the area of production and are subject to Ontario's Farm Tax Reduction Program.

BUILDING COSTS

For those crops where buildings are used in grading, packing, and/or storage, a building cost allowance was made.

The initial cost of these structures was based on the assumption that buildings were five years old.

Depreciation	%
Steel and concrete structures	2.5
Wood structures	5.0
Greenhouses	2.0

The interest on building investment was set at 6.4 percent, which was also used in calculating interest on land investment.

Repairs and Maintenance	%
Steel structures	1.0
Concrete structures	0.25
Wood structures	1.5

Insurance

0.5 percent of initial cost

The cost of machine housing was covered under tractor and machine costs.

Allowances are made for the use of picking-baskets, storage-bins, and other pieces of reusable equipment required in the production of certain crops.

INTEREST ON OPERATING CAPITAL

Interest on operating capital required to finance each crop was calculated from the time an expenditure was made until the time income was generated from sales. Operating capital includes the cost of materials, fuel, repairs, hired labor and other cash items. In this study, the interest rate applied to operating capital was the average prime rate of 10.8 percent plus 1 percent.

OTHER OVERHEAD

This allowance covers such items as the study crop's share of utilities, accounting and administration costs, use of the farm automobile, and general farm maintenance.

OTHER COST CONSIDERATIONS

Depending on the crop studied, there are certain additional costs such as crop insurance, marketing board fees, grading charges and selling commissions.

YIELDS AND RETURNS

For each study crop presented in this report, a footnote to the table defines how the average yield and average price were calculated.

Additional information on average yields and prices is shown in the Appendix of this report.

GROSS MARGIN ANALYSIS

Gross margin is the amount above the variable costs that a crop contributes to the operator for his wages, management, and to the investment in machinery and land.

CASH ANALYSIS

The cash analysis section estimates the returns over cash costs. Cash costs comprise all variable costs, as well as interest on the debt portion of tractor and machine investment, real estate taxes and other overhead costs.

Table 1. - Fresh Market Cabbage: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 161 hours/ha	785	318
Plants, 21,000/ha	475	192
Fertilizer, N - 169 kg/ha, P_2O_5 - 225 kg/ha, K_2O - 112 kg/ha	307	124
Herbicide	14	6
Insecticides	168	67
Crates, non-returnable , 1,619/ha	2,104	852
Tractor and machine costs:		
Repairs and maintenance	56	23
Fuel	82	33
Interest on operating capital	117	47
TOTAL	4,108	1,662
FIXED COSTS		
Operator labor, 21 hours/ha	140	58
Management allowance, 5% of gross income	250	101
Tractor and machine costs:		
Depreciation	107	43
Interest on investment	58	23
Insurance and storage	30	12
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	958	388
TOTAL ALL COSTS[a]	5,066	2,050
COST PER UNIT (Based on average yields of 30.2 tonne/ha and 13.5 ton/ac.[b])	$167.75/tonne	$151.85/ton
GROSS MARGIN ANALYSIS (Based on average prices of $165.30/tonne and $150.00/ton[c])		
Gross income	4,992	2,025
Total variable costs	4,108	1,662
Gross margin	884	363
CASH ANALYSIS		
Gross income	4,992	2,025
Cash costs[d]	4,190	1,695
Returns over cash costs	802	330

[a] Storage costs not considered.

[b] Five-year average yields 1980-84.

[c] Two-year average price used in this analysis.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $25/hectare ($10/acre) plus taxes and other overhead costs.

Table 2. - Fresh Market Cabbage: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	29.01	11.74
Discing	1	.49	.20	13.79	5.58
Spread fertilizer	1	.37	.15	6.50	2.63
Spray herbicide	1	.37	.15	6.89	2.79
Cultivating and level	1	.49	.20	13.15	5.32
Haul plants	a	1.23	.50	24.91	10.08
Planting	1	29.60	12.00	284.76	115.24
Spray insecticides	5	1.85	.75	34.52	13.97
Row cultivating	1	.49	.20	8.99	3.64
Row cultivating and sidedressing	1	.49	.20	10.00	4.05
Hand hoeing (labor only)	1	17.30	7.00	77.84	31.50
Harvest and pack (labor only)	a	124.00	50.00	617.76	250.00
Load and haul to market[b]	a	4.94	2.00	129.78	52.52

[a] Operation performed as required.

[b] Hauling to market by use of a truck.

Table 3. - Fresh Market Carrots: Estimated Cost of Production, on Muck Soils, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 47 hours/ha	234	95
Seed, pelleted, 1,700,000/ha	409	166
Fertilizer, N - 72 kg/ha; P_2O_5 - 28 kg/ha; K_2O - 140 kg/ha	155	63
Herbicides	184	75
Insecticides	85	35
Fungicides	132	53
Tractor and machine costs:		
Repairs and maintenance	222	90
Fuel	166	67
Pallet box repairs	31	12
Storage building repairs and maintenance	55	22
Electricity in storage	76	31
Interest on operating capital	133	54
TOTAL	1,882	763
FIXED COSTS		
Operator labor, 42 hours/ha	272	110
Management allowance, 5% of gross income	425	172
Tractor and machine costs:		
Depreciation	507	205
Interest on investment	322	130
Insurance and storage	109	44
Pallet box use	710	288
Storage building, interest & depreciation	375	151
Interest on land, $17,297/ha @ 6.4% per annum	1,107	448
Taxes	49	20
Other overhead costs	37	15
TOTAL	3,913	1,583
TOTAL ALL COSTS[a]	5,795	2,346
COST PER UNIT (Based on average yields of 67.0 tonne/ha and 29.9 ton/ac.[b])	$86.49/tonne	$78.46/ton
GROSS MARGIN ANALYSIS (Based on average price of $126.80/tonne and $115.00/ton[c])		
Gross income	8,496	3,438
Total variable costs	1,882	763
Gross margin	6,614	2,675
CASH ANALYSIS		
Gross income	8,496	3,438
Cash costs[d]	2,114	856
Returns over cash costs	6,382	2,582

[a] Carrots delivered to shipper in bulk bins, no grading and packaging costs are included.

[b] Five-year average yields 1980-84.

[c] Two-year average prices 1983-84.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $141/ha ($57/acre) plus taxes and other overhead costs.

Table 4. - Fresh Market Carrots on Muck Soils: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Fall discing	1	.98	.40	27.58	11.16
Spring discing	1	.98	.40	27.58	11.16
Spread fertilizer	1	.62	.25	11.98	4.85
Spray herbicide	2	.98	.40	20.06	8.12
Disc and level	1	.98	.40	28.74	11.63
Seeding	1	2.47	1.00	91.38	26.98
Spray (carrot weevil)	1	4.94	2.00	74.63	30.20
Spray (rust fly)	2	.98	.40	20.06	8.12
Spray herbicide	1	.49	.20	10.03	4.06
Spray control (blight)	6	3.95	1.60	80.26	32.48
Hand weed	1	9.88	4.00	44.48	18.00
Row cultivate and sidedress	1	2.47	1.00	54.24	21.95
Row cultivate	1	2.47	1.00	49.17	19.90
Hand harvest	1	4.94	2.00	491.81	13.00
Combine	1	18.53	7.50	439.48	199.03
Hauling and unloading at farm storage	1	24.71	10.00	73.84	177.85
Load for market	a	9.88	4.00	57.87	29.88
Haul to market	a	2.47	1.00	32.12	23.42

[a] Operation performed as required.

Table 5. - Fresh Market Cauliflower: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 321 hours/ha	1,643	665
Plants, 21,000/hectare	346	140
Fertilizer, N - 162 kg/ha, P_2O_5 - 198 kg/ha, K_2O - 198 kg/ha	290	117
Herbicides	14	6
Insecticides	194	79
Tying bands	76	30
Crates, non-returnable, 1,483	1,927	780
Tractor and machine costs:		
Repairs and maintenance	49	20
Fuel	176	71
Interest on operating capital	139	56
TOTAL	4,854	1,964
FIXED COSTS		
Operator labor, 32.5 hours/ha	211	86
Management allowance, 5% of gross income	384	155
Tractor and machine costs:		
Depreciation	155	63
Interest on investment	81	33
Insurance and housing	53	22
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	1,257	510
TOTAL ALL COSTS[a]	6,111	2,474
COST PER UNIT		
(Based on average yields of 22.2 tonne/ha and 9.9 ton/ac.[b])	$275.27/tonne	$249.90/ton
GROSS MARGIN ANALYSIS		
(Based on average prices of $346.03/tonne and $314.00/ton[c])		
Gross income	7,681	3,109
Total variable costs	4,854	1,964
Gross margin	2,827	1,145
CASH ANALYSIS		
Gross income	7,681	3,109
Cash costs[d]	4,945	2,001
Returns over cash costs	2,736	3,109

[a] Cauliflower is packed into crates at the farm before being hauled to shipper.

[b] Five-year yields 1980-84.

[c] Two year average prices 1983-84.

[d] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $34/ha ($14/acre) plus taxes and other overhead costs.

Table 6. - Fresh Market Cauliflower: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	29.01	11.74
Discing	1	.49	.20	13.79	5.58
Spreading fertilizer	1	.62	.25	11.98	4.85
Spraying herbicide	1	.37	.15	7.51	3.04
Cultivating and harrowing	1	.49	.20	13.27	5.37
Hauling plants	a	2.47	1.00	49.89	20.19
Planting	1	29.60	12.00	301.17	121.88
Row cultivating	2	2.47	1.00	49.17	19.90
Hand hoeing (labor only)	1	37.10	15.00	166.80	67.50
Spray insecticides	5	1.85	.75	37.58	15.21
Row cultivating and sidedressing fertilizer	1	.49	.20	10.82	4.38
Tying heads	1	86.50	35.00	389.19	157.50
Harvesting (labor only)	a	185.00	75.00	926.64	375.00
Loading and hauling to market[b]	a	24.70	10.00	360.40	145.85

[a] Operation performed as required.

[b] Hauling to market by use of a truck.

Table 7. - Fresh Market Celery (Hand Harvest): Estimated Cost of Production on Muck Soils, Ontario, 1985

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor, 843 hours/ha	4,014	1,624
Seedlings, 40,000/ha	494	200
Greenhouse materials	830	336
Fertilizer, N - 229 kg/ha; P_2O_5 - 111 kg/ha; K_2O - 334 kg/ha	527	214
Herbicide	114	46
Insecticides	175	71
Fungicides	135	55
Crates, non-returnable, 2,470	3,212	1,300
Tractor and machine costs:		
Repairs and maintenance	104	42
Fuel	280	115
Greenhouse repairs	32	13
Interest on operating capital	288	117
TOTAL	10,205	4,133
FIXED COSTS		
Operator labor, 79 hours/ha	516	209
Management allowance, 5% of gross income	879	355
Tractor and machine costs:		
Depreciation	228	92
Interest on investment	131	53
Insurance and storage	49	29
Interest on land, $17,297/ha @ 6.4% per annum	1,107	448
Building use, greenhouse and packing shed	103	42
Taxes	37	15
Other overhead costs	37	15
TOTAL	3,087	1,258
TOTAL ALL COSTS[a]	13,292	5,391
COST PER UNIT (Based on average yields of 83.7 tonne/ha and 37.4 ton/ac.[b])	$158.80/tonne	$144.14/ton
GROSS MARGIN ANALYSIS (Based on average prices of $209.71/tonne and $190.00/ton[c])		
Gross income	17,553	7,106
Total variable costs	10,205	4,133
Gross margin	7,348	2,973
CASH ANALYSIS		
Gorss income	17,553	7,106
Cash costs[d]	10,341	4,188
Returns over cash costs	7,212	2,918

[a] Includes costs of hand harvesting, washing and packing into crates at farm before delivery to shipper.

[b] Five-year average yields 1980-84.

[c] Two-year average prices 1983-84.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $57/ha ($23/acre) plus taxes and other overhead costs.

Table 8. - Fresh Market Celery (Hand Harvest) on Muck Soils: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Fall discing	1	2.47	1.00	68.94	27.90
Spread fertilizer	1	.74	.30	14.41	5.83
Disc and level	1	.99	.40	28.74	11.63
Transplant in greenhouse	1	148.26	60.00	667.18	270.00
Greenhouse maintenance	1	14.83	6.00	96.37	39.00
Haul plants	1	12.36	5.00	287.01	116.15
Plant in field (by hand)	1	172.97	70.00	778.38	315.00
Hand weed	1	54.36	22.00	244.63	99.00
Sidedress	2	4.94	2.00	90.74	36.72
Irrigating	3	44.48	18.00	554.87	224.55
Spray weeds	2	1.48	.60	30.10	12.18
Spray insecticide and fungicide	6	4.45	1.80	90.29	36.54
Cut in field	a	444.78	180.00	2,223.94	900.00
Load for market	a	12.36	5.00	92.29	37.35
Haul to market	a	2.47	1.00	57.87	23.42

[a] Operation performed as required.

Table 9. - Head Lettuce: Estimated Cost of Production, on Muck Soils, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 54.9 hours/ha	2,630	1,064
Seed, pelleted, 270,000/ha	88	36
Fertilizer, N - 98 kg/ha, P_2O_5 - 98 kg/ha, K_2O - 98 kg/ha	164	66
Insecticides	281	114
Fungicides	76	31
Tractor and machine costs:		
Repairs and maintenance	128	52
Fuel	231	93
Crates, non-returnable, 835	2,682	1,086
Interest on operating capital	185	75
TOTAL	6,465	2,617
FIXED COSTS		
Operator labor, 36 hours/ha	231	94
Management allowance, 5% of gross income	531	215
Tractor and machine costs:		
Depreciation	268	108
Interest on investment	145	59
Insurance and storage	71	29
Interest on land, $17,297 @ 6.4% per annum	1,107	448
Taxes	37	15
Other overhead costs	12	5
TOTAL	2,402	973
TOTAL ALL COSTS[a]	8,867	3,590
COST PER UNIT		
(Based on average yields of 2,965 doz./ha and 1,200 doz./acre[b])	$2.99/doz.	$2.99/doz.
GROSS MARGIN ANALYSIS		
(Based on average price of $3.58/doz.[c])		
Gross income	10,615	4,296
Total variable costs	6,465	2,617
Gross margin	4,150	1,679
CASH ANALYSIS		
Gross income	10,615	4,296
Cash costs[d]	6,608	2,674
Returns over cash costs	4,007	1,622

[a] Includes costs of harvesting, packing into crates and delivery to shipper.

[b] Five-year average yields 1980-84.

[c] Two year average prices 1983-84.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $64/ha ($26/acre) plus taxes and other overhead costs.

Table 10. - Head Lettuce on Muck Soils: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Fall discing	1	.99	.40	27.58	11.16
Spread fertilizer	1	.74	.30	14.41	5.83
Disc and level	1	.99	.40	28.74	11.63
Seeding	1	2.47	1.00	66.67	26.98
Hand thin	1	123.55	50.00	555.99	225.00
Irrigating	1	29.65	12.00	251.68	101.85
Spray insecticides	7	4.48	1.80	90.29	36.54
Spray fungicides	5	3.71	1.50	75.22	30.44
Hand hoe	1	98.84	40.00	444.79	180.00
Row cultivate and sidedress	1	2.47	1.00	54.24	21.95
Harvest and pack	a	291.58	118.00	1,457.92	590.00
Spread crates	a	12.36	5.00	312.72	126.55
Haul to market	a	12.36	5.00	324.45	131.30

[a] Operation performed as required.

Table 11. - Peppers for Fresh Market: Estimated Cost of Production, Ontario, 1985

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor, 190 hours/ha	935	378
Plants, 27,180/ha	510	206
Fertilizer, N - 204 kg/ha, P_2O_5 - 168 kg/ha, K_2O - 168 kg/ha	231	94
Herbicide	19	8
Insecticides	153	62
Fungicides	72	29
Crates, non-returnable, 1,385/ha	1,028	416
Tractor and machine costs:		
Repairs and maintenance	113	46
Fuel	176	71
Interest on operating capital	127	52
TOTAL	3,364	1,362
FIXED COSTS		
Operator labor, 28.5 hours/ha	270	109
Management allowance, 5% of gross income	231	93
Tractor and machine costs:		
Depreciation	200	81
Interest on investment	103	42
Insurance and housing	56	23
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	1,233	499
TOTAL ALL COSTS	4,597	1,861
COST PER UNIT		
(Based on average yields of 14.6 tonnes/ha and 6.5 ton/ac.[a])	$314.86/tonne	$286.31/ton
GROSS MARGIN ANALYSIS		
(Based on average prices of $317.38/tonne and $288.00/ton[b])		
Gross income	4,634	1,872
Total variable costs	3,364	1,362
Gross margin	1,270	510
CASH ANALYSIS		
Gross income	4,634	1,872
Cash costs[c]	3,466	1,403
Returns over cash costs	1,168	469

[a] Five-year average yields 1980-84.

[b] Two-year average prices 1983-84.

[c] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $45/ha ($18/acre) plus taxes and other overhead.

Table 12. - Peppers for Fresh Market: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	1.48	.60	43.56	17.63
Discing	1	.99	.40	27.58	11.16
Spread fertilizer	1	.99	.40	17.37	7.03
Spray herbicide	1	.99	.40	18.43	7.46
Cultivating and levelling	1	.99	.40	25.29	10.64
Haul plants and water	a	2.96	1.20	60.42	24.45
Planting	1	17.80	7.20	170.85	69.14
Row cultivating	2	2.47	1.00	39.14	15.84
Hand hoe (labor only)	1	17.30	7.00	77.84	31.50
Row cultivating and sidedressing fertilizer	1	1.48	.60	26.54	10.74
Spray insecticides	7	6.92	2.80	128.96	52.19
Spray fungicides	2	1.98	.80	36.84	14.91
Harvest & pack (labor only)	a	138.00	56.00	691.89	280.00
Loading in field	a	29.60	12.00	243.65	98.60
Hauling to market (using truck)	a	7.41	3.00	243.50	98.54

[a] Operation performed as required.

Table 13. - Fresh Market Potatoes: Estimated Cost of Production, Ontario 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 24 hours/ha	129	52
Seed, potato	541	219
Seed, rye	13	5
Seed treatment	36	15
Fertilizer, N - 168 kg/ha, P_2O_5 - 168 kg/ha, K_2O - 168 kg/ha	231	94
Herbicides	136	55
Insecticides	149	60
Fungicides	54	22
Topkill	43	17
Tractor and machine costs:		
Repairs and maintenance	123	50
Fuel	256	103
Marketing fees	33	13
Interest on operating capital	154	62
TOTAL	1,898	767
FIXED COSTS		
Operator labor, 17 hours/ha	109	44
Management allowance, 5% of gross income	112	45
Tractor and machine costs:		
Depreciation	254	103
Interest on investment	135	55
Insurance and storage	76	31
Interest on land, $3,707/ha @ 6.4% per annum	237	96
Taxes	12	5
Other overhead costs	37	15
TOTAL	972	394
TOTAL ALL COSTS[a]	2,870	1,161
COST PER UNIT (Based on average yields of 18.5 tonne/ha and 165 cwt/ac.[b])	$155.14/ha	$7.04/cwt
GROSS MARGIN ANALYSIS (Based on average price of $121.25/tonne and $5.50/cwt[c])		
Gross income	2,243	908
Total variable costs	1,898	767
Gross margin	345	141
CASH ANALYSIS		
Gross income	2,243	908
Cash costs[d]	2,006	811
Returns over cash costs	237	97

[a] Does not include storage and marketing costs.

[b] Two-year average yields 1983-84.

[c] Price estimated based on previous year's average return.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $59/ha ($24/acre) plus taxes and other overhead costs.

Table 14. - Fresh Market Potatoes: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Fall plowing	1	.82	.33	28.29	11.45
Discing	2	.74	.30	27.08	10.96
Plant rye	1	.99	.40	35.39	14.32
Spring plowing	1	.99	.40	34.30	13.88
Discing	1	.37	.15	13.54	5.48
Field cultivate	1	.37	.15	12.50	5.06
Cut seed	1	.86	.35	19.77	8.00
Haul fertilizer	1	.62	.25	30.22	12.23
Haul seed	1	1.24	.50	56.66	22.93
Planting	1	4.32	1.75	92.84	37.57
Row cultivate	1	1.36	.55	30.89	12.50
Hilling	1	.82	.33	17.87	7.23
Spray herbicide	1	.40	.16	11.56	4.68
Spray insecticide and fungicide	6	1.63	.66	55.03	22.27
Spray topkill	1	.27	.11	9.17	3.71
Dig and windrow	1	2.47	1.00	71.34	28.87
Harvesting	1	7.41	3.00	123.80	50.10
Hauling to storage	1	7.41	3.00	345.95	140.00
Unloading and grading	1	7.41	3.00	65.36	26.45

Table 15. - Sweet Corn for Fresh Market (Hand Harvest): Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 95 hours/ha	477	193
Seed, 13.5 kg/ha	119	48
Fertilizer, N - 126 kg/ha, P_2O_5 - 64 kg/ha, K_2O - 74 kg/ha	143	58
Herbicide	45	18
Insecticides	111	45
Crates, non-returnable 415/ha	311	126
Tractor and machine costs:		
Repairs and maintenance	95	39
Fuel	127	51
Custom work	12	5
Interest on operating capital	57	23
TOTAL	1,497	606
FIXED COSTS		
Operator labor, 25 hours/ha	164	66
Management allowance, 5% of gross income	115	46
Tractor and machine costs:		
Depreciation	155	63
Interest on investment	83	34
Insurance and housing	34	14
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	924	374
TOTAL ALL COSTS[a]	2,421	980
COST PER UNIT		
(Based on average yields of 2,125 doz./ha and 860 doz. ac.[b])	$1.14/doz.	$1.14/doz.
GROSS MARGIN ANALYSIS		
(Based on average prices of $1.08/doz.[c])		
Gross income	2,295	929
Total variable costs	1,497	606
Gross margin	798	323
CASH ANALYSIS		
Gross income	2,295	929
Cash costs[d]	1,590	644
Returns over cash costs	705	285

[a] Sweet corn is hand harvested and packed into crates at the farm before being hauled to shipper.

[b] Five-year average yields 1980-84.

[c] Two-year average prices 1983-84.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $36/ha ($15/acre) plus taxes and other overhead.

Table 16. - Sweet Corn for Fresh Market (Hand Harvest): Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.79	.32	23.23	9.40
Discing	1	.99	.40	27.58	11.16
Spread fertilizer	1	.99	.40	17.37	7.03
Spray herbicide	1	.99	.40	18.43	7.46
Cultivate and harrow	1	.99	.40	26.51	10.73
Haul seed and fertilizer	a	.30	.12	5.76	2.33
Planting	1	.59	.24	21.94	8.88
Row cultivating	2	1.58	.64	25.06	10.14
Custom apply "N" and herbicide	1	--	--	11.74	4.75
Picking and hauling to farm yard	a	69.20	28.00	459.62	186.00
Sort and pack (labor only)	a	24.70	10.00	123.55	50.00
Haul to market[b]	a	2.47	1.00	64.89	26.26
Disc down stalks	1	.99	.40	26.84	10.86

[a] Operation performed as required.

[b] Using a truck.

-- Not applicable.

Table 17. - Field Tomatoes for Fresh Market: Estimated Cost of Production, Ontario, 1985

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor, 417 hours/ha	2,067	837
Plants, 24,710/ha	618	250
Fertilizer: plant starter 6-24-24, 49 ℓ/ha	39	16
N - 225 kg/ha, P_2O_5 - 93 kg/ha, K_2O - 270 kg/ha	280	113
Herbicide	14	6
Insecticide	32	13
Fungicide	146	59
Containers	2,742	1,110
Use of picking baskets	49	20
Tractor and machine costs:		
Repairs and maintenance	153	62
Fuel	273	111
Interest on operating capital	252	102
TOTAL	6,665	2,699
FIXED COSTS		
Operator labor, 39 hours/ha	247	100
Management allowance, 5% of gross income	465	189
Tractor and machine costs:		
Depreciation	295	119
Interest on investment	150	61
Insurance and storage	83	33
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	1,613	653
TOTAL ALL COSTS[a]	8,278	3,352
COST PER UNIT (Based on average yield of 20.6 tonnes/ha and 9.2 ton/ac.[b])	$401.84/tonne	$364.35/ton
GROSS MARGIN ANALYSIS (Based on average prices of $451.82/tonne and $410.00/ton[c])		
Gross income	9,307	3,772
Total variable costs	6,665	2,699
Gross margin	2,642	1,073
CASH ANALYSIS		
Gross income	9,307	3,772
Cash costs[d]	6,788	2,749
Returns over cash costs	2,519	1,023

[a] Tomatoes are graded and packed into containers at farm before being shipped to dealer.

[b] Five-year average yield 1980-84.

[c] Two-year 1983-84 average price.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $66/ha ($27/acre) plus taxes and other overhead costs.

Table 18. - Field Tomatoes for Fresh Market: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	1.48	.60	43.56	17.63
Discing	1	.99	.40	27.58	11.16
Spread fertilizer	1	.99	.40	17.37	7.03
Spray herbicide	1	.99	.40	18.43	7.46
Field cultivate and level	1	.99	.40	26.29	10.64
Haul plants	a	1.98	.80	39.91	16.15
Planting	1	17.80	7.20	170.85	69.14
Row cultivate	1	.99	.40	15.81	6.40
Hand hoe (labor only)	1	24.70	10.00	111.20	45.00
Row cultivate and sidedress	1	2.96	1.20	53.52	21.66
Spray for insect and disease control	6	5.93	2.40	110.55	44.74
Harvest and pack	a	380.00	154.00	2,243.71	908.00
Haul to market[b]	a	14.80	6.00	389.34	157.56

[a] Operation performed as required.

[b] Using a truck.

Table 19. - Yellow Seed Onions: Estimated cost of Production, on Muck Soils, Ontario, 1985

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor, 86.5 hours/ha	415	168
Seed, pelleted, treated, 1,110,000/ha	717	290
Fertilizer, N - 147 kg/ha, P_2O_5 - 49 kg/ha, K_2O - 247 kg/ha	330	133
Herbicides	699	283
Insecticides	177	72
Fungicides	210	85
Sprout inhibitor	46	19
Plastic covers	40	16
Tractor and machine costs:		
Repairs and maintenance	165	87
Fuel	214	67
Pallet box repairs	22	9
Storage building and repairs	70	28
Electricity, used in storage	37	15
Interest on operating capital	197	80
TOTAL	3,339	1,352
FIXED COSTS		
Operator labor, 35 hours/ha	226	91
Management allowance, 5% of gross income	377	153
Tractor and machine costs:		
Depreciation	548	222
Interest on investment	352	143
Insurance and storage	120	48
Pallet box use	498	202
Storage building, interest and depreciation	385	156
Interest on land, $17,297/ha @ 6.4% per annum	1,107	448
Taxes	49	20
Other overhead costs	37	15
TOTAL	3,699	1,498
TOTAL ALL COSTS[a]	7,038	2,850
COST PER UNIT		
(Based on average yields of 41.5 tonne/ha and 18.5 ton/ac.[b])	$169.59/tonne	$154.05/ton
GROSS MARGIN ANALYSIS		
(Based on average prices of $181.90/tonne and $165.00/ton[c])		
Gross income	7,549	3,052
Total variable costs	3,339	1,352
Gross margin	4,210	1,700
CASH ANALYSIS		
Gross income	7,549	3,052
Cash costs[d]	3,582	1,450
Returns over cash costs	3,967	1,602

[a] Onions are delivered to shipper in bulk bins, costs of grading and bagging are not included.

[b] Five-year average yield 1980-84.

[c] Two-year average prices 1983-84.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $154/ha ($62/acre) plus taxes and other overhead costs.

Table 20. - Yellow Seed Onions on Muck Soils: Operation Cost, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Fall discing	1	.99	.40	27.58	11.16
Spread fertilizer	1	.62	.25	11.98	4.85
Spray herbicide	2	.99	.40	20.06	8.12
Disc and level, spring	1	.99	.40	28.74	11.63
Seeding (onion magget control)	1	2.47	1.00	66.67	26.98
Spray herbicide, post emerge	8	3.95	1.60	80.26	32.48
Spray insecticide	5	2.47	1.00	50.16	20.30
Spray fungicide	9	4.45	1.80	90.29	36.54
Spray sprout inhibitor	1	.49	.20	10.03	4.06
Hand weed	1	42.00	17.00	189.04	76.50
Row cultivate and sidedress	1	2.47	1.00	54.24	21.95
Pull and windrow	1	7.41	3.00	602.62	243.87
Combine	1	14.83	6.00	154.54	62.54
Stack pallet boxes in field	a	4.94	2.00	77.99	31.56
Haul to storage	a	14.83	6.00	273.70	110.76
Unloading at storage	a	4.94	2.00	24.71	10.00
Load and haul to market	a	2.47	1.00	116.88	47.30

[a] Operation performed as required.

Table 21. - Cabbage for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $ per hectare	Cost, $ per acre
VARIABLE COSTS		
Hired labor, 37 hours/ha	167	67
Plants, 29,450/ha[a]	214	87
Fertilizer, N - 169 kg/ha, P_2O_5 - 225 kg/ha, K_2O - 112 kg/ha	307	124
Herbicide	14	6
Insecticides	151	61
Tractor and machine costs:		
Repairs and maintenance	66	27
Fuel	118	48
Custom harvest & haul	579	234
Crop insurance	87	35
Marketing fees	21	9
Interest on operating capital	17	7
TOTAL	1,741	705
FIXED COSTS		
Operator labor, 16.4 hours/ha	107	43
Management allowance, 5% of gross income	134	54
Tractor and machine costs:		
Depreciation	100	41
Interest on investment	55	22
Insurance and storage	20	8
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	19	8
Other overhead costs	37	15
TOTAL	788	319
TOTAL ALL COSTS	2,529	1,024
COST PER UNIT		
(Based on average yields of 45.2 tonne/ha and 20.2 ton/ac.[b])	$55.95/tonne	$50.69/ton
GROSS MARGIN ANALYSIS		
(Based on average prices of $59.20/tonne and $53.72/ton[c])		
Gross income	2,675	1,085
Total variable costs	1,741	705
Gross margin	934	380
CASH ANALYSIS		
Gross income	2,675	1,085
Cash costs[d]	1,821	738
Returns over cash costs	854	347

[a] Includes only one half of plant cost, as processor supplies plants for early crop and the grower for the late crop.

[b] Five-year average yields 1980-84.

[c] 1985 contract price.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $24/ha ($10/acre) plus taxes and other overhead costs.

Table 22. - Cabbage for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.37	.15	17.25	6.98
Spread fertilizer	1	.37	.15	8.87	3.59
Spray herbicide	1	.37	.15	9.56	3.87
Field cultivate, harrow and pack	1	.74	.30	31.04	12.56
Haul plants	a	1.24	.50	38.03	15.39
Planting	1	29.70	12.00	347.53	140.64
Spray insecticides	4	1.48	.60	38.33	15.51
Row cultivate	1	.49	.20	12.13	4.91
Hand hoe (labor only)	1	17.30	7.00	77.84	31.50
Row cultivate and sidedress fertilizer	1	.49	.20	13.15	5.32

a Operation performed as required.

Table 23. - Cucumbers for Processing: Estimated cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 541 hours/ha	2,697	1,092
Seed, 3.36 kg/ha	80	32
Fertilizer, N - 118 kg/ha, P_2O_5 - 168 kg/ha, K_2O - 168 kg/ha	223	90
Insecticide	41	17
Fungicides	131	53
Tractor and machine costs:		
Repairs and maintenance	50	20
Fuel	90	36
Bee rental	50	20
Use of picking baskets	90	36
Crop insurance	96	39
Marketing and grading fees	38	16
Interest on operating capital	35	14
TOTAL	3,621	1,465
FIXED COSTS		
Operator labor, 5.4 hours/ha	86	35
Management allowance, 5% of gross income	236	95
Tractor and machine costs:		
Depreciation	73	30
Interest on investment	39	16
Insurance and housing	15	6
Interest on land, $4.942/ha @ 6.4% per annum	316	128
Taxes	19	8
Other overhead	37	15
TOTAL	821	333
TOTAL ALL COSTS	4,442	1,798
COST PER UNIT (Based on average yields of 20.16 tonne/ha and 8.99 ton/ac.[a]	$220.34/tonne	$200.00/ton
GROSS MARGIN ANALYSIS (Based on average price of $233.66/tonne and $212.03/ton[b]		
Gross income	4,710	1,906
Total variable costs	3,621	1,465
Gross margin	1,089	441
CASH ANALYSIS		
Gross income	4,710	1,906
Cash costs[c]	3,694	1,495
Returns over cash costs	1,016	411

[a] Five-year average yields 1980-84.

[b] 1985 price based on 1984 average plus an increase of ½ of 1%.

[c] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $17/ha ($7/acre) plus taxes and other overhead.

Table 24. - Cucumbers for Processing: Operation Costs, Ontaric, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.37	.15	17.25	6.98
Cultivating, harrowing and packing	1	.37	.15	15.52	6.28
Planting	1	.99	.40	31.31	12.67
Hand hoeing (labor only)	1	17.30	7.00	77.84	31.50
Row cultivating	1	.49	.20	12.13	4.91
Spray fungicides	3	1.11	.45	28.71	11.62
Row cultivate and sidedress fertilizer	2	1.24	.50	32.89	13.31
Spray insecticide	1	.37	.15	9.56	3.87
Picking (labor only)	a	524.00	212.00	2,619.31	1,060.00
Loading in field	a	4.94	2.00	111.05	44.94
Hauling to market [b]	a	2.47	1.00	55.52	22.47

[a] Operation performed as required.

[b] Hauling with tractor and wagons.

Table 25. - Green Peas for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Seed, 252 kg/ha	227	92
Fertilizer, N - 13 kg/ha, P_2O_5 - 25 kg/ha, K_2O - 38 kg/ha	46	19
Herbicides	39	15
Tractor and machine costs:		
Repairs and maintenance	23	9
Fuel	35	14
Custom harvesting and hauling	287	116
Crop insurance	59	24
Marketing and grading fees	11	5
Interest on operating capital	7	3
TOTAL	734	297
FIXED COSTS		
Operator labor, 4 hours/ha	27	10
Management allowance, 5% of gross income	63	26
Tractor and machine costs:		
Depreciation	30	12
Interest on investment	18	7
Insurance and storage	6	3
Interest on land, $3,707/ha @ 6.4% per annum	237	96
Taxes	13	5
Other overhead	37	15
TOTAL	431	174
TOTAL ALL COSTS	1,165	471
COST PER UNIT (Based on average yields of 3.48 tonne/ha and 1.55 ton/ac.[a])	$334.77/tonne	$303.87/ton
GROSS MARGIN ANALYSIS (Based on average price of $363.99/tonne and $330.30/ton[b])		
Gross income	1,267	512
Total variable costs	734	297
Gross margin	533	215
CASH ANALYSIS		
Gross income	1,267	512
Cash costs[c]	792	320
Returns over cash costs	475	192

[a] Five-year average yields 1980-84.

[b] 1985 based on 1984 average plus an increase of 2.4%.

[c] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $8/ha ($3/acre) plus taxes and other overhead.

Table 26. - Green Peas for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.35	.14	16.09	6.51
Spreading fertilizer	1	.35	.14	8.28	3.35
Spraying herbicides	2	.69	.28	17.89	7.24
Cultivating, harrowing and packing	1	.35	.14	14.48	5.86
Hauling seed	1	.25	.10	7.59	3.07
Planting	1	.99	.40	33.88	13.71
Custom harvesting and hauling	1	--	--	287.14	116.20

-- Not applicable.

Table 27. - Green and Wax Beans for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Seed, 89 kg/ha	290	117
Fertilizer, N - 17 kg/ha, P_2O_5 - 34 kg/ha, K_2O - 50 kg/ha	46	19
Herbicide	19	8
Tractor and machine costs:		
Repairs and maintenance	21	9
Fuel	33	13
Custom harvesting and hauling	307	124
Custom spraying	15	6
Crop insurance	94	38
Marketing and grading fees	17	7
Interest on operating capital	9	3
TOTAL	851	344
FIXED COSTS		
Operator labor, 3.6 hours/ha	23	9
Management allowance, 5% of gross income	76	31
Tractor and machine costs:		
Depreciation	28	12
Interest on investment	16	7
Insurance and storage	6	2
Interest on land, $3,707/ha @ 6.4% per annum	237	96
Taxes	13	5
Other overhead	37	15
TOTAL	436	177
TOTAL ALL COSTS	1,287	521
COST PER UNIT (Based on average yields of 5.92 tonne/ha and 2.64 ton/ac.[a])	$217.40/tonne	$197.35/ton
GROSS MARGIN ANALYSIS (Based on average price of $257.87/tonne and $234.00/ton[b])		
Gross income	1,527	618
Total variable costs	851	344
Gross margin	676	274
CASH ANALYSIS		
Gross income	1,527	618
Cash costs[c])	908	367
Returns over cash costs	619	251

[a] Five-year average yield 1980-84.

[b] 1985 contract price.

[c] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $7/ha ($3/acre) plus taxes and other overhead.

Table 28. - Green and Wax Beans for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.35	.14	16.09	6.51
Spread fertilizer	1	.35	.14	8.28	3.35
Spray herbicide	1	.35	.14	8.95	3.62
Cultivating, harrowing and packing	1	.35	.14	14.48	5.86
Hauling seed	1	.25	.10	7.59	3.07
Planting	1	.49	.20	21.42	8.67
Custom spray herbicide	1	--	--	14.83	6.00
Row cultivating	1	.44	.18	10.95	4.43
Custom harvesting and hauling	1	--	--	306.65	124.10

-- Not applicable.

Table 29. - Lima Beans for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Seed, 59 kg/ha	94	38
Fertilizer, N - 17 kg/ha, P_2O_5 - 34 kg/ha, K_2O - 50 kg/ha	46	19
Herbicides	57	23
Tractor and machine costs:		
Repairs and maintenance	27	11
Fuel	41	17
Custom harvesting and hauling	264	107
Crop insurance	94	38
Marketing fees	12	5
Interest on operating capital	6	3
TOTAL	641	261
FIXED COSTS		
Operator labor, 4.7 hours/ha	32	13
Management allowance, 5% of gross income	75	30
Tractor and machine costs:		
Depreciation	35	14
Interest on investment	21	8
Insurance and storage	7	3
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	19	8
Other overhead	37	15
TOTAL	542	219
TOTAL ALL COSTS	1,183	480
COST PER UNIT (Based on average yields of 2.76 tonne/ha and 1.23 ton/ac.[a])	$428.62/tonne	$390.24/ton
GROSS MARGIN ANALYSIS (Based on average prices of $543.29/tonne and $493.00/ton[b])		
Gross income	1,499	606
Total variable costs	641	261
Gross margin	858	345
CASH ANALYSIS		
Gross income	1,499	606
Cash costs[c]	706	288
Returns over cash costs	793	318

[a] Five-year average yield 1980-84.

[b] 1984 contract price.

[c] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $9/ha ($4/acre) plus taxes and other overhead costs.

Table 30. - Lima Beans for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.34	.14	16.09	6.51
Spread fertilizer	1	.34	.14	8.28	3.35
Spray herbicide	1	.34	.14	8.95	3.62
Cultivating, harrowing and packing	2	.69	.28	28.99	11.73
Hauling seed	1	.25	.10	7.59	3.07
Planting	1	.49	.20	21.42	8.67
Spray herbicide	1	.34	.14	8.95	3.62
Rotary hoeing	1	.34	.14	8.82	3.57
Row cultivating	1	.54	.22	13.37	5.41
Custom swathing	1	--	--	21.00	8.50
Custom harvesting and hauling	1	--	--	243.15	98.40

-- Not applicable.

Table 31. - Peppers for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per ac.
VARIABLE COSTS		
Hired labor, 163 hours/ha	797	322
Plants, 27,180/ha	510	206
Fertilizer, N - 118 kg/ha, P_2O_5 - 168 kg/ha, K_2O - 168 kg/ha	232	94
Herbicide	19	8
Insecticides	153	62
Allowance for use of picking baskets	60	24
Tractor and machine costs:		
Repairs and maintenance	100	41
Fuel	190	77
Crop insurance	131	53
Marketing fees	28	11
Interest on operating capital	66	27
TOTAL	2,286	925
FIXED COSTS		
Operator labor, 28.5 hours/ha	185	75
Management allowance, 5% of gross income	165	67
Tractor and machine costs:		
Depreciation	156	63
Interest on investment	84	34
Insurance and storage	31	13
Interest on land, $4.942/ha @ 6.4 % per annum	316	128
Taxes	20	8
Other overhead costs	37	15
TOTAL	994	403
TOTAL ALL COSTS	3,280	1,328
COST PER UNIT		
(Based on average yields of 12.62 tonne/ha and 5.63 ton/ac.[a])	$259.90/tonne	$235.88/ton
GROSS MARGIN ANALYSIS		
(Based on average price of $261.26/tonne and $237.08/ton[b])		
Gross income	3,297	1,335
Total variable costs	2,286	925
Gross margin	1,011	410
CASH ANALYSIS		
Gross income	3,297	1,335
Cash costs[c]	2,379	963
Returns over cash costs	918	372

[a] Five-year average yields 1980-84.

[b] Price based on 1984 average plus an increase of ½ of 1%.

[c] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $36/ha ($15/acre) plus taxes and other overhead costs.

Table 32. - Peppers for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.37	.15	17.25	6.98
Spreading fertilizer	1	.37	.15	8.87	3.59
Spraying herbicide	1	.37	.15	9.56	3.87
Cultivating, harrowing and packing	2	.74	.30	31.04	12.56
Hauling plants	a	1.24	.50	38.03	15.39
Planting	1	29.60	12.00	347.53	140.64
Row cultivating	1	.62	.25	15.17	6.14
Spraying insecticides	7	2.59	1.05	67.06	27.14
Hand hoe (labor only)	1	17.30	7.00	77.84	31.50
Row cultivating and sidedressing	2	.74	.30	39.49	15.98
Hand picking (labor only)	a	119.00	48.00	593.05	240.00
Loading in field	a	14.80	6.00	203.64	82.41
Hauling to market [b]	a	2.47	1.00	55.52	22.47

[a] Operation performed as required.

[b] Hauling to market by using a tractor and wagons.

Table 33. - Potatoes for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 25.2 hours/ha	136	55
Seed, 2,106 kg/ha	541	219
Seed treatment	36	15
Cover crop costs, clover seed	25	10
Fertilizer, N - 185 kg/ha, P_2O_5 - 185 kg/ha, K_2O - 185 kg/ha	257	104
Lime	43	17
Herbicides	107	43
Insecticides	168	68
Fungicides	90	37
Topkill	43	17
Tractor and machine costs:		
Repairs and maintenance	147	59
Fuel	308	125
Marketing fees	36	15
Interest on operating capital	168	66
TOTAL	2,105	850
FIXED COSTS		
Operator labor, 14.8 hours/ha	100	41
Management allowance, 5% of gross income	140	57
Tractor and machine costs:		
Depreciation	355	144
Interest on investment	198	80
Insurance and storage	101	41
Interest on land, $3,706/ha @ 6.4% per annum	237	96
Taxes	12	5
Other overhead costs	37	15
TOTAL	1,180	479
TOTAL ALL COSTS[a]	3,285	1,329
COST PER UNIT		
(Based on average yields of 20.3 tonne/ha and 181.5 cwt/ac.[b])	$161.82/tonne	$7.32/cwt
GROSS MARGIN ANALYSIS		
(Based on average prices of $137.99/tonne and $6.25/cwt[c])		
Gross income	2,801	1,134
Total variable costs	2,105	850
Gross margin	696	284
CASH ANALYSIS		
Gross income	2,803	1,134
Cash costs[d]	2,240	904
Returns over cash costs	563	230

[a] This does not include storage costs.

[b] Two-year average yields 1983-84.

[c] Price estimated based on previous year's average return.

[d] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $86/ha ($34/acre) plus taxes and other overhead costs.

Table 34. - Potatoes for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Disc	1	1.24	.50	45.12	18.26
Seed cover crop	1	.62	.25	22.12	8.95
Spring plow (cover crops)	1	1.24	.50	42.87	17.35
Chisel plow	1	1.24	.50	38.72	15.67
Disc	1	1.24	.50	45.12	18.26
Field cultivate	2	.82	.33	27.85	11.27
Cut seed	1	.86	.35	19.77	8.00
Haul fertilizer and seed	1	.86	.35	111.35	45.06
Plant	1	1.78	.72	57.92	23.44
Row cultivate	1	.69	.28	15.91	6.44
Hilling	1	1.24	.50	27.06	10.95
Haul water for spraying	1	1.24	.50	58.02	23.48
Spray herbicide	1	.49	.20	14.46	5.85
Spray insecticide	1	.32	.13	10.58	4.28
Spray fungicide	5	1.73	.70	58.09	23.51
Spray topkill	1	.32	.13	10.58	4.28
Dig and windrow	1	2.47	1.00	87.33	35.34
Harvesting	1	7.41	3.00	247.87	100.31
Hauling to storage	1	7.41	3.00	343.13	138.86
Unload at storage	1	4.94	2.00	24.71	10.00

Table 35. - Red Beets for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 62 hours/ha	278	113
Seed, 7 kg/ha	62	25
Fertilizer, N - 123 kg/ha, P_2O_5 - 142 kg/ha, K_2O - 101 kg/ha	212	86
Herbicides	285	115
Tractor and machine costs:		
Repairs and maintenance	47	19
Fuel	72	29
Custom harvesting and hauling	533	216
Crop insurance	52	21
Marketing fees	20	8
Interest on operating capital	61	25
TOTAL	1,622	657
FIXED COSTS		
Operator labor, 13 hours/ha	84	34
Management allowance, 5% of gross income	127	52
Tractor and machine costs:		
Depreciation	66	27
Interest on investment	37	15
Insurance and storage	13	5
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead	37	15
TOTAL	700	284
TOTAL ALL COSTS	2,322	941
COST PER UNIT		
(Based on average yields of 30.25 tonne/ha and 13.49 ton/ac.[a])	$76.76/tonne	$69.76/ton
GROSS MARGIN ANALYSIS		
(Based on average price of $84.20/tonne and $76.41/ton[b])		
Gross income	2,547	1,030
Total variable costs	1,622	657
Gross margin	925	373
CASH ANALYSIS		
Gross income	2,547	1,030
Cash costs[c]	1,695	686
Returns over cash costs	852	344

[a] Five-year average yields 1980-84.

[b] 1985 price based on 1984 average price.

[c] Cash costs include total variable costs plus interest on debt portion of investment in tractors and machines of $16/ha ($6/acre) plus taxes and other overhead costs.

Table 36. - Red Beets for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.79	.32	31.60	12.79
Discing	1	.40	.16	18.41	7.45
Spreading fertilizer	1	.40	.16	9.46	3.83
Spraying herbicides	2	.79	.32	20.41	8.26
Cultivating and harrowing	1	.40	.16	15.44	6.25
Planting	1	1.98	.80	62.59	25.33
Row cultivating	3	3.56	1.44	87.50	35.41
Hand hoe (labor only)	1	61.80	25.00	277.99	112.50
Row cultivating and sidedress fertilizer	1	1.38	.56	36.84	14.91
Spraying foliar micronutrients	2	.79	.32	20.44	8.27
Custom harvesting	1	--	--	266.63	107.90
Custom hauling	1	--	--	266.63	107.90
Helping harvest (labor only)	a	2.47	1.00	16.06	6.50

-- Not applicable.

[a] Operation performed as required.

Table 37. - Sweet Corn for Processing: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Seed, 9 kg/ha	43	18
Fertilizer, N - 111 kg/ha, P_2O_5 - 68 kg/ha, K_2O - 68 kg/ha	129	52
Herbicides	51	21
Insecticide	14	6
Tractor and machine costs:		
Repairs and maintenance	24	10
Fuel	37	15
Custom spraying and apply "N"	27	11
Custom harvest and haul	155	63
Crop insurance	32	13
Marketing fees	9	3
Interest on operating capital	5	2
TOTAL	526	214
FIXED COSTS		
Operator labor, 3.9 hours/ha	25	10
Management allowance, 5% of gross income	46	18
Tractor and machine costs:		
Depreciation	32	13
Interest on investment	19	8
Insurance and storage	7	3
Interest on land, $3,707/ha @ 6.4% per annum	237	96
Taxes	13	5
Other overhead	37	15
TOTAL	416	168
TOTAL ALL COSTS	942	382
COST PER UNIT		
(Based on average yields of 11.39 tonne/ha and 5.08 ton/ac.[a])	$82.70/tonne	$75.20/ton
GROSS MARGIN ANALYSIS		
(Based on average prices of $80.21/tonne and $72.79/ton[b])		
Gross income	914	370
Total variable costs	526	214
Gross margin	388	156
CASH ANALYSIS		
Gross income	914	370
Cash costs[c]	584	237
Returns over cash costs	330	133

[a] Five-year average yield 1980-84.

[b] 1985 contract price used.

[c] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $8/ha ($3/acre) plus taxes and other overhead costs.

Table 38. - Sweet Corn for Processing: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.99	.40	39.51	15.99
Discing	1	.34	.14	16.09	6.51
Spread fertilizer	1	.34	.14	8.28	3.35
Cultivating, harrowing and packing	1	.34	.14	14.48	5.86
Haul seed	1	.25	.10	7.59	3.07
Planting	1	.49	.20	21.42	8.67
Spray herbicide	1	.34	.14	8.95	3.62
Row cultivate	1	.44	.18	10.95	4.43
Custom apply "N" and herbicide	1	--	--	13.59	5.50
Custom spray insecticide.	1	--	--	13.59	5.50
Custom harvest and haul..	1	--	--	155.03	62.74
Discing stalks	1	.34	.14	16.09	6.51

-- Not applicable.

Table 39. - Tomatoes for Processing, Hand Harvest: Estimated Cost of Production, Ontario, 1985

	Cost, $	
	per hectare	per acre
VARIABLE COSTS		
Hired labor, 349 hours/ha	1,747	707
Plants, 22,485/ha	427	173
Fertilizer: plant starter, 37 ℓ/hectare	39	16
N - 113 kg/ha, P_2O_5 - 94 kg/ha, K_2O - 269 kg/ha	207	84
Herbicides	82	33
Insecticides and Fungicides (custom applied, materials included)	327	133
Basket use for picking, 247/ha	121	49
Tractor and machine costs:		
Repairs and maintenance	163	66
Fuel	385	156
Crop insurance	114	46
Marketing board and grading fees	61	25
Interest on operating capital	144	58
TOTAL	3,817	1,546
FIXED COSTS		
Operator labor, 34 hours/ha	220	89
Management allowance, 5% of gross returns	248	100
Tractor and machine costs:		
Depreciation	222	90
Interest on investment	118	48
Insurance and storage	45	18
Interest on land, $4,942/ha @ 6.4% per annum	316	128
Taxes	20	8
Other overhead costs	37	15
TOTAL	1,226	496
TOTAL ALL COSTS	5,043	2,042
COST PER UNIT (Based on average yields of 40.1 tonne/ha and 17.9 ton/ac.[a])	$125.76/tonne	$114.08/ton
GROSS MARGIN ANALYSIS (Based on average prices of $123.72/tonne and $112.27/ton[b])		
Gross income	4,961	2,010
Total variable costs	3,817	1,546
Gross margin	1,144	464
CASH ANALYSIS		
Gross income	4,961	2,010
Cash costs[c]	3,926	1,590
Returns over cash costs	1,035	420

[a] Five-year average yields, 1980-84.

[b] 1984 average price.

[c] Cash costs include total variable costs, plus interest on debt portion of investment in tractors and machines of $52/ha ($21/acre) plus taxes and other overhead costs.

Table 40. - Tomatoes for Processing, Hand Harvest: Operation Costs, Ontario, 1985

Operation	Times over	Labor hours		Labor, tractor and machine costs, $	
		per ha	per ac.	per ha	per ac.
Plowing	1	.74	.30	29.65	12.00
Discing	1	.37	.15	17.25	6.98
Spread fertilizer	1	.37	.15	8.87	3.59
Field cultivate and harrow	1	.37	.15	14.48	5.86
Spray herbicide	1	.37	.15	9.56	3.87
Harrow and pack	1	.37	.15	15.52	6.28
Haul water and plants	a	1.73	.70	55.82	22.59
Planting	1	24.71	10.00	218.24	88.32
Row cultivate	1	1.11	.45	25.18	10.19
Row cultivate and sidedress	1	1.24	.50	30.52	12.35
Hand hoe (labor only)	1	17.30	7.00	77.84	31.50
Hand picking (labor only)	a	287.63	116.40	1,438.15	582.00
Spread baskets	a	1.98	.80	32.02	20.96
Load in field	a	31.14	12.60	579.36	234.46
Haul to processor[b]	a	9.88	4.00	310.66	125.72

[a] Operation performed as required.

[b] Using tractor and wagons.

Appendix Table 1. - Average Yields per Acre for Vegetables, Ontario, 1979-1984

Crop	Unit	1979	1980	1981	1982	1983	1984
				- '000/acre -			
Asparagus(f & p)	lb	1.6	1.5	1.2	1.6	1.1	1.1
Beans, green & wax (f)	lb	5.8	5.1	5.4	5.7	5.6	5.7
Beans, green & wax (p)	lb	4.9	5.5	4.1	4.9	4.9	5.7
Beans, Lima (p)	lb	3.0	2.6	2.2	2.3	2.5	2.7
Beets, topped	lb	28.5	28.4	25.8	27.2	25.5	28.7
Beets, bunching	lb	10.0	10.5	12.5	12.4	10.8	12.9
Broccoli (f & p)	lb	5.4	5.5	9.0	11.6	11.8	9.1
Brussel Sprouts (f & p)	lb	7.1	5.7	5.2	6.3	9.7	10.1
Cabbage (f & p)	lb	35.4	35.6	35.4	37.8	34.0	34.5
Carrots, bunching	lb	11.2	11.4	13.4	12.5	10.1	10.2
Carrots, topped (f & p)	lb	63.0	42.4	55.8	63.4	62.6	65.1
Cauliflower (f & p)	lb	19.7	18.3	16.7	19.3	20.1	21.3
Celery (f & p)	lb	73.9	72.4	73.4	65.3	65.4	70.3
Corn, sweet (f)	doz	0.8	0.8	0.8	0.9	0.8	0.9
Corn, sweet (p)	lb	10.3	9.9	10.3	10.3	9.2	10.6
Cucumber (f)	lb	18.8	15.7	15.9	16.4	17.7	15.7
Cucumber (p)	lb	17.9	17.3	18.1	19.2	18.2	n/a
Lettuce, head (f)	doz	1.4	1.4	1.1	1.2	1.1	1.2
Onions: dry, sets	lb	20.8	22.5	14.2	20.2	16.4	18.6
Onions: dry, silverskin	lb	8.7	8.8	9.2	10.1	10.1	10.1
Onions: dry, spanish	lb	22.5	20.9	23.9	29.6	25.1	23.1
Onions: dry, yellowskin	lb	37.3	29.9	40.6	39.0	37.1	31.6
Onions, bunching	lb	14.3	15.9	16.5	14.9	13.6	16.2
Parsnips	lb	21.6	19.6	17.4	19.4	17.5	17.6
Peas, green (p)	lb	3.2	3.3	3.3	3.2	2.0	3.4
Peppers (f & p)	lb	11.4	8.7	10.6	11.4	11.1	10.8
Potatoes	lb	20.0	21.0	22.0	21.1	19.8	19.1
Pumpkin & Squash (p)	lb	23.4	26.7	26.5	25.9	24.6	n/a
Radishes	lb	9.4	8.8	5.6	5.7	9.1	9.3
Rutabagas	lb	37.9	38.5	40.7	43.7	24.8	36.0
Spinach (f & p)	lb	7.2	6.6	5.4	5.4	5.6	8.0
Tomatoes (f)	lb	17.1	15.7	17.0	19.9	20.1	20.2
Tomatoes (p)	lb	39.8	34.5	36.8	37.9	29.6	39.3

Note: (f) fresh; (f & p) fresh & processing; (p) processing;
n/a not available.

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economics and Policy Coordination Branch, Ontario Ministry of Agriculture and Food.

Appendix Table 2. - Average Prices (Imperial Units) Received for Vegetables, Ontario, 1979-1984

Crop	Unit	1979	1980	1981	1982	1983	1984
				- cents -			
Asparagus (f & p)	lb	69.0	81.9	91.9	107.1	102.8	101.0
Beans, green & wax (f)	lb	24.0	23.1	25.9	26.3	27.0	28.0
Beans, green & wax (p)	lb	9.0	9.2	10.5	11.2	11.0	11.6
Beans, Lima (p)	lb	18.6	20.0	25.6	23.6	23.0	24.3
Beets, topped	lb	3.2	3.4	4.3	4.6	5.0	5.4
Beets, bunching	lb	23.0	27.4	26.7	25.3	43.4	41.0
Broccoli (f & p)	lb	15.6	27.5	32.5	28.6	34.2	34.6
Brussel Sprouts (f & p)	lb	33.8	35.2	39.6	42.9	48.2	44.3
Cabbage (f & p)	lb	4.9	7.0	6.2	5.4	9.8	5.5
Carrots, topped (f & p)	lb	3.2	6.1	5.1	3.4	8.1	3.1
Carrots, bunching	lb	13.5	13.5	18.0	18.4	16.7	16.3
Cauliflower (f & p)	lb	11.8	13.9	14.2	13.9	17.8	15.3
Celery (f & p)	lb	5.9	7.6	9.1	8.5	13.6	8.2
Corn, sweet (f)	doz	74.0	90.4	106.7	100.3	120.4	105.0
Corn, sweet (p)	lb	2.7	2.9	3.5	3.7	3.8	3.6
Cucumber (f)	lb	10.6	10.8	11.4	12.3	12.8	11.0
Cucumber (p)	lb	9.0	8.1	8.4	10.2	9.6	10.5
Cucumber, greenhouse	doz	334.0	362.0	416.0	384.0	506.0	630.9
Lettuce, head (f)	doz	180.0	246.0	329.0	271.5	347.7	331.0
Onions: dry sets	lb	8.7	8.0	15.9	6.3	11.8	10.9
Onions: dry, silverskin	lb	31.4	30.6	41.3	40.0	40.3	41.0
Onions: dry, spanish	lb	8.7	13.2	18.4	14.3	14.8	15.2
Onions: dry, yellowseed	lb	4.8	10.2	7.8	4.4	11.0	4.4
Onions, bunching	lb	32.9	37.7	37.0	29.8	34.1	34.8
Parsnips	lb	11.1	15.3	19.3	14.0	16.0	16.0
Peas, green (p)	lb	12.0	13.3	14.9	15.8	15.0	16.1
Peppers (f & p)	lb	12.2	15.0	13.8	13.6	14.7	15.1
Potatoes	lb	3.2	7.9	6.2	4.4	7.8	6.8
Pumpkin & Squash (p)	lb	1.4	1.5	1.6	1.7	2.0	1.7
Radishes	lb	20.5	21.8	22.4	21.6	26.3	33.7
Rutabagas	lb	3.8	5.8	4.9	4.2	7.1	3.9
Spinach (f & p)	lb	19.9	20.0	25.3	23.5	29.8	29.0
Tomatoes (f)	lb	15.6	16.3	18.2	17.6	20.1	20.2
Tomatoes, greenhouse	lb	45.4	45.2	46.5	52.7	60.8	80.1
Tomatoes (p)	lb	4.3	4.5	5.0	5.3	5.1	5.6

Note: (f) fresh; (f & p) fresh & processing; (p) processing;
n/a not available

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economics and Policy Coordination Branch, Ontario Ministry of Agriculture and Food.

Appendix Table 3. - Average Yields per Hectare for Vegetables, Ontario, 1979-1984

Crop	1979	1980	1981	1982	1983	1984
			- tonnes/ha -			
Asparagus (f & p)	1.8	1.7	1.4	1.8	1.2	1.2
Beans, green & wax (f)	6.4	5.8	6.1	6.4	6.3	6.4
Beans, green & wax (p)	5.5	6.1	4.6	5.5	5.5	6.4
Beans, Lima (p)	3.4	2.9	2.4	2.5	2.8	3.0
Beets, topped	30.7	32.0	28.9	30.5	28.6	32.2
Beets, bunching	11.3	11.7	14.0	13.9	11.9	14.5
Broccoli (f & p)	6.0	6.2	10.1	13.0	13.2	10.2
Brussel Sprouts (f & p)	7.9	6.5	5.8	7.1	10.9	11.3
Cabbage (f & p)	38.4	39.9	39.7	42.4	38.1	38.7
Carrots (bunching)	12.7	12.6	15.0	14.0	11.3	11.4
Carrots, topped, (f & p)	65.5	38.7	62.5	71.1	70.2	73.0
Cauliflower (f & p)	22.0	20.5	18.7	21.6	22.5	23.9
Celery (f & p)	82.7	81.1	82.2	73.2	73.3	78.8
Corn, sweet (f)	5.6	5.5	5.6	6.1	5.5	6.1
Corn, sweet (p)	11.8	11.1	11.5	11.6	10.3	11.9
Cucumber (f)	21.1	17.6	17.8	18.4	19.8	17.6
Cucumber (p)	20.1	19.4	20.3	21.5	20.4	n/a
Lettuce, head (f)	23.3	23.6	18.0	19.9	16.5	20.2
Onions, dry, sets	23.2	25.2	15.9	22.6	18.4	20.9
Onions, dry, silverskin	9.9	9.9	10.4	11.3	11.3	11.3
Onions, dry, spanish	22.4	23.9	26.8	33.2	28.1	25.9
Onions, dry, yellowskin	34.3	33.5	45.5	43.7	41.6	35.4
Onions, bunching	16.0	17.8	18.5	16.7	17.9	18.2
Parsnips	17.5	21.8	17.4	21.7	19.6	19.7
Peas, green (p)	3.6	3.7	3.7	3.5	2.2	3.8
Peppers (f & p)	12.9	9.7	11.9	12.8	12.4	12.1
Potatoes	19.3	23.5	24.7	23.7	22.2	21.4
Pumpkin & Squash (p)	26.2	30.0	29.7	29.0	27.6	n/a
Radishes	10.5	9.9	6.3	6.4	10.2	10.4
Rutabagas	34.7	43.1	45.6	49.0	27.8	31.2
Spinach (f & p)	8.1	7.4	6.1	6.1	6.3	9.0
Tomatoes (f)	19.1	17.4	19.1	22.3	22.5	22.6
Tomatoes (p)	44.6	38.7	41.2	42.6	33.2	44.1

Note: (f) fresh: (f & p) fresh and processing; (p) processing;
n/a not available

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economcis and Policy Coordination Branch, Ontario Ministry of Agriculture and Food.

Appendix Table 4. - Average Prices (Metric Units) Received for Vegetables, Ontario, 1979-1984

Crop	1979	1980	1981	1982	1983	1984
			- cents/kg -			
Asparagus (f & p)	152.1	180.6	202.5	236.1	226.7	222.7
Beans, green & wax (f)	52.9	50.9	57.0	57.9	59.4	61.7
Beans, green & wax (p)	19.8	20.3	23.2	24.6	24.3	25.6
Beans, Lima (p)	41.0	44.1	56.5	52.0	50.7	53.6
Beets, topped	7.1	7.5	9.5	10.2	11.0	11.9
Beets, bunching	50.7	60.4	58.8	55.8	95.6	90.4
Broccoli (f & p)	34.4	60.6	71.6	63.1	75.4	76.3
Brussel Sprouts (f & p)	74.5	77.6	87.4	94.5	106.4	97.7
Cabbage (f & p)	10.8	15.4	13.6	12.0	21.7	12.1
Carrots, topped (f & p)	7.1	13.4	11.2	7.4	18.0	6.8
Carrots, bunching	29.8	29.8	39.5	40.6	36.8	35.9
Cauliflower (f & p)	26.0	30.6	31.2	30.6	39.3	33.7
Celery (f & p)	13.0	16.8	20.1	18.8	30.0	18.1
Corn, sweet (f)	27.2	33.2	39.2	36.8	44.6	38.6
Corn, sweet (p)	6.0	6.4	7.7	8.2	8.4	7.9
Cucumber (f)	23.4	23.8	25.2	27.1	28.1	24.3
Cucumber (f & p)	19.8	17.9	19.8	22.5	21.2	23.2
Cucumber, greenhouse	92.1	99.8	114.6	105.9	139.4	173.9
Lettuce, head (f)	26.5	36.2	48.4	39.9	51.1	48.7
Onions: dry, sets	19.1	17.7	35.1	14.0	25.9	24.0
Onions: dry, silverskin	69.3	67.4	91.1	88.3	88.7	90.4
Onions: dry, spanish	19.2	29.0	40.6	31.5	32.6	33.5
Onions: dry, yellowseed	10.6	22.4	17.2	9.8	24.2	9.7
Onions: bunching	72.5	83.1	81.6	65.8	75.3	76.7
Parsnips	24.5	33.7	42.5	31.0	35.3	35.3
Peas, green (p)	26.5	29.3	32.8	34.8	33.1	33.3
Peppers (f & p)	26.9	33.1	30.4	30.0	32.4	33.3
Potatoes	7.1	17.4	13.6	9.8	17.2	15.0
Pumpkin & Squash	3.1	3.3	3.5	3.7	4.4	3.8
Radishes	45.2	48.1	49.4	47.6	58.0	74.3
Rutabagas	8.4	12.8	10.8	9.2	15.7	8.6
Spinach (f & p)	43.9	44.1	55.8	51.7	65.8	63.9
Tomatoes (f)	34.4	35.9	40.1	38.8	45.3	44.5
Tomatoes, greenhouse	100.1	99.6	102.5	116.3	134.0	176.6
Tomatoes, (p)	9.5	9.9	11.0	11.8	11.2	12.4

Note: (f) fresh; (f & p) fresh and processing; (p) processing;
n/a not available.

Source: Seasonal Fruit and Vegetable Report, Annual Summary, Economics and Policy Coordination Branch, Ontario Ministry of Agriculture and Food.